

# VANESSA LIU

Computer Science and Financial Management | (647) 668-0313 | [vwslu@uwaterloo.ca](mailto:vwslu@uwaterloo.ca)  
[www.linkedin.com/in/vanessa-liu014/](https://www.linkedin.com/in/vanessa-liu014/) | <https://github.com/NessaLiu> | [vanessaliu.me](http://vanessaliu.me)

## TECHNICAL SKILLS

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**Languages:** Python, HTML5, CSS, JavaScript, C, MySQL

**Tools & Libraries:** Jupyter Notebook, React, NumPy, Matplotlib, yFinance, discord.py, BeautifulSoup, Figma

## PROJECTS

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### Safe Portfolio Maker Project

- Created a program in **Jupyter Notebook** in a three-person team to create the safest portfolio given a **CSV file** of tickers using several libraries like **Yahoo Finance**, **NumPy Financial**, **Matplotlib**, and others.
- Included **numerical, graphical and thorough written analysis** on the reasoning behind the calculations for risk as well as the selection process of stocks to be included in the final portfolio.

### Side-Scrolling Platform Game

- Coded a single-player side-scrolling platform using **Python** and **PyGame** which incorporated jumping and running, a level system, health status, item collection, shooting interactions with enemy AI, music and sound effects.
- Incorporated **object-oriented programming** for more efficient and reusable functions, making the game easier to manage.

### “Finn” Financial Discord Bot

- Worked collaboratively in a group of 10 peers to launch an all-in-one financial analytics and smart portfolio creator Discord bot.
- Extracted data using **yFinance** to provide key statistics and build a desired portfolio based on user needs.
- Designed image and thumbnail embeds for bot commands to enhance the **user experience** and visual appeal of the application.

### “Vantoria” Entertainment Discord Bot

- Developed a multi-purpose discord bot using **discord.py** and slash commands featuring several mini-games, a responsive quote generation system using message reactions, the ability to create, edit and delete customized user profiles and more.
- Accessed and stored information by utilizing **MySQL** database systems and **BeautifulSoup** for web scraping.

## EXPERIENCE

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### Entrepreneur Club - Executive Member

Toronto, ON

- Planned, perfected and presented lessons on entrepreneurship skill development and other related topics such as finance management with the team, further growing teamwork skills. *Sept. 2019 - June 2021*
- Effectively utilized social media platforms and educational platforms including Instagram, Discord and Google Classroom to promote and deliver club content.

### Cantonese Club - President

Toronto, ON

- Led a team of 6 students following a vision to use club events to celebrate the culture - coordinated lessons and prepared weekly engaging activities, with separate post-meeting discussions to analyze the performance. *Sept. 2019 - June 2020*
- Gained a 25% increase in club members using consistent advertisement posts on the club's Instagram account.

### Children's Church Summer Camp Volunteer - Small Group Leader

Toronto, ON

- Engaged in 1 month of prior collaborative planning and preparation to build team skills with other leaders. *June 2018 - Aug. 2018*
- Honed leadership skills during the 2 weeks of working with over 100 kids.
- Independently managed a group of 5 individuals daily, leading them in post-lesson discussions to boost communication skills.

## EDUCATION

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### University of Waterloo

Waterloo, ON

- Candidate for Bachelor of Computing and Financial Management *Sept. 2021 - Present*
- Relevant courses:** Designing Functional Programs, Financial Markets and Data Analytics, Elementary Algorithm Design

## ACTIVITIES & INTERESTS

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- Interests:** Art and Design, Music, Piano, Singing, Video Games, Exercising, Reading webcomics
- Passion in design and illustration for over 8 years; used tradition and digital art mediums, aspire to apply to occupational tasks.
- Over 10 years of musical study; dedication demonstrated through the completion of the Royal Conservatory of Music's Certificate Programs (Level 10 Piano, Level 10 Music History and Level 10 Harmony & Counterpoint).